



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,629	02/05/2004	Ranganathan Krishnan	040250	8348
23696	7590	11/17/2005	EXAMINER	
QUALCOMM, INC 5775 MOREHOUSE DR. SAN DIEGO, CA 92121			LEE, JOHN J	
			ART UNIT	PAPER NUMBER
			2684	

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/773,629	KRISHNAN ET AL.
	Examiner	Art Unit
	JOHN J. LEE	2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 19 August 2005.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-19 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-19 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/23/2005</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments/Amendment

1. Applicant's arguments/amendments received on August 19, 2005 have been carefully considered but they are not persuasive because the teaching of all the cited reference reads on all the rejected and amended claims as set forth in the previous rejection. Therefore, the finality of this Office Action is deemed proper.

Contrary to the assertions at pages 5 - 8 of the Arguments, claims 1, 8, 12, and 16 are not patentable.

During examination, the USPTO must give claims their broadest reasonable interpretation.

Applicant should submit an argument based on previously rejected claims for pointing out disagreements with the examiner's contentions. Applicant must also discuss the references applied against the previously rejected claims. The submitted claims (independent claims 1, 8, 12, and 16) are different from the previously rejected claims (or the claims should be marked "amended" in the claims).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Suzuki (6,788,138)

reference teaches transmission power control that power control circuit operates open loop power control and close loop power control between wireless terminal and base station in CDMA system, and Hunzinger (2002/0137535) teaches transmission power control including power related interference between wireless terminal and base station in CDMA system. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Suzuki system as taught by Hunzinger, provide the motivation to enhance a power transmission control technique for reducing the interference in wireless CDMA system.

Re claims 1, 8, 12, and 16: Applicant argues that the combination of teaching of Suzuki and Hunzinger do not teach the claimed invention “determining a wide-band interference (this limitation is **not** in currently submitted claims) and detecting a wide-band interference above a threshold”. However, The Examiner respectfully disagrees with Applicant’s assertion that the combination of teaching of Suzuki and Hunzinger do not teach the claimed invention. Contrary to Applicant’s assertion, the Examiner is of the opinion that Suzuki teaches the transmission circuit performs open loop power control and close loop power control and operates whether open loop control or close loop control depending on the transmission power and transmission power designated value as see Fig. 4, 10 (Fig. 4, 10 and column 11, lines 9 – 49), regarding the claimed limitation. More specifically, transmission **power control based on wide-band interference** and inherently using the wide-band in current wireless **CDMA system**. Therefore, the Fig. 4 teaches a threshold between open loop control and close loop control for detecting and determining power and interference value (if above the threshold, performing close loop

control, or if below the threshold value, performing open loop control) in CDMA system. Furthermore, Hunzinger teaches transmission power related interference in CDMA system (pages 10, paragraphs 105 – 108). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Suzuki system as taught by Hunzinger, provide the motivation to enhance a power transmission control technique for reducing the interference in wireless CDMA system.

Applicant's attention is directed to the rejection below for the reasons as to why this limitation is not patentable.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1 – 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (US Patent number 6,788,138) in view of Hunzinger (US 2002/0137535).

Regarding **claims 1 and 8**, Suzuki discloses that a method of power control (column 2, lines 25 – 51 and Fig. 1). Suzuki teaches that determining whether a wide-band (power control use for any band including wide-band) interference (error from transmission power designate value, negative fed-back of detection voltage) is above or below a threshold (Fig. 4, 10 and column 7, lines 15 – column 8, lines 41, where teaches detecting negative fed-back of detection voltage is lower or higher than threshold).

Suzuki teaches that enabling closed-loop power control in response to determining a wide-band interference above a threshold (Fig. 4, 10 and column 7, lines 15 – column 8, lines 41, where teaches in the graph in Fig. 4, enabling closed-loop power control in response to determining in the detection value above a threshold). Suzuki teaches that disabling closed-loop power control in response to determining the wide-band interference is below the threshold (Fig. 4, 10 and column 7, lines 15 – column 8, lines 41, where teaches in the graph in Fig. 4, enabling open-loop power control in response to determining in the detection value below a threshold means disabling the closed-loop power control in response to determining in the detection value below a threshold).

Suzuki teaches that sending a power feedback signal indicating a power transmission level if the closed-loop power control is enabled (Fig. 4, 10, column 8, lines 61 – column 9, lines 20, and column 7, lines 15 – column 8, lines 41, where teaches as closed loop power control is enable, transmitting a power feedback signal indicating a power level such that setting at L or H level).

Suzuki does not exactly disclose the limitation “determining a wide-band interference”. However, Hunzinger discloses the limitation “determining a wide-band interference” (pages 2, paragraphs 15 and Fig. 1, where teaches in CDMA systems, signals can be received in the presence of high level of wide-band interference and determines wide-band interference and noise in the field may require). It would have been obvious to one having ordinary skill in the art at the time the invention was to modify the Suzuki as taught by Hunzinger, provide the motivation to achieve enhancing the interference detection for quality signal reception in the CDMA system.

Regarding **claims 2 and 9**, Suzuki discloses that disabling open-loop power control in response to determining a wide-band interference above the threshold (Fig. 4, 10 and column 7, lines 15 – column 8, lines 41, where teaches in the graph in Fig. 4, enabling closed-loop power control in response to determining in the detection value above a threshold means disabling the open loop power control in response to determining in the detection value above a threshold). Suzuki discloses that enabling open-loop power control in response to determining the wide-band interference is below the threshold (Fig. 4, 10 and column 7, lines 15 – column 8, lines 41, where teaches in the graph in Fig. 4, enabling open-loop power control in response to determining in the detection value below a threshold means disabling the closed-loop power control in response to determining in the detection value below a threshold).

Regarding **claim 3**, Suzuki discloses that the power feedback signal is a power-up command indicating an increase in power transmission level (column 11, lines 19 – 40, Fig. 9, 12, and column 12, lines 18 – 40, where teaches adjusting the detection power feedback signal ratio to increase or decrease by power command).

Regarding **claim 4**, Suzuki discloses that the power feedback signal is a power-down command indicating a decrease in power transmission level (column 11, lines 19 – 40, Fig. 9, 12, and column 12, lines 18 – 40, where teaches adjusting the detection power feedback signal ratio to increase or decrease by power command).

Regarding **claims 5, 10, 14, and 18**, Suzuki discloses that the power feedback signal is a

power-up command if a quality parameter is less than a target quality parameter (column 18, lines 36 – column 19, lines 7 and Fig. 19, where teaches if the power level is below the threshold, the power feedback signal is a power increase command).

Regarding **claims 6, 11, 15, and 19**, Suzuki discloses that the power feedback signal is a power-down command if a quality parameter is greater than a target quality parameter (column 18, lines 36 – column 19, lines 7 and Fig. 19, where teaches if the power level is above the target threshold, the power feedback signal is a power decrease command).

Regarding **claim 7**, Suzuki and Hunzinger discloses all the limitation, as discussed in claim 1.

Regarding **claim 12**, Suzuki and Hunzinger discloses all the limitation, as discussed in claim 1. Furthermore, Suzuki further discloses that a baseband processor (8 in Fig. 8) configured to enable closed-loop power control in response to detecting the wide-band interference, the baseband processor coupled to the receiver (column 2, lines 25 – 51, Fig. 8, 10, and column 7, lines 15 – column 8, lines 41, where teaches in the graph in Fig. 4, the controller enables closed-loop power control in response to determining in the detection value above a threshold). Suzuki further discloses that a transmitter coupled to the baseband processor (Fig. 8 and column 10, lines 43 – column 11, lines 8).

Regarding **claim 13**, Suzuki and Hunzinger discloses all the limitation, as discussed in claims 1 and 12.

Regarding **claim 16**, Suzuki and Hunzinger discloses all the limitation, as discussed in claims 1 and 12.

Regarding **claim 17**, Suzuki and Hunzinger discloses all the limitation, as discussed in claims 1 and 12.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

Any response to this action should be mailed to:

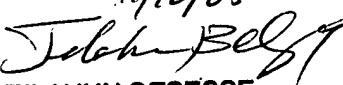
Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed (703) 308-9051, (for formal communications intended for entry)

Or: (703) 308-6606 (for informal or draft communications, please label "PROPOSED" or "DRAFT").

Hand-delivered responses should be brought to USPTO Headquarters, Alexandria, VA.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John J. Lee** whose telephone number is **(571) 272-7880**. He can normally be reached Monday-Thursday and alternate Fridays from 8:30am-5:00 pm. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, **Nay Aung Maung**, can be reached on **(571) 272-7882**. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

11/12/05

TILAHUN GESESSE
PRIMARY EXAMINER

J.L.
November 9, 2005

John J Lee